

Wisconsin Land and Water Conservation

Annual Progress Report — 2005

Summarizing Wisconsin's achievements in reducing polluted runoff and conserving land and water resources.



- ◆ *Resource Management Programs*
- ◆ *Runoff Management Program*

- ◆ Wisconsin Department of Natural Resources
- ◆ Wisconsin Department of Agriculture, Trade, and Consumer Protection

2005 Annual Progress Report

Wisconsin Land and Water Conservation Board

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http://www.datcp.state.wi.us/arm/agriculture/land-water/conservation/land_water_rmp.jsp

About the Cover

Langmanor Farm, located in Jefferson County, uses rain gardens to capture runoff from their farm building rooftops. By letting rain water infiltrate instead of running off, rain gardens prevent erosion and water pollution, and help replenish ground water. Rain gardens at Langmanor Farm were created by LanDesign.

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INTRODUCTION

Wisconsin is blessed with abundant water and land resources. The state has a long history of protecting these resources with the help of farmers, conservation groups, watershed and lake groups, tribes, local governments and state and federal governments. This report to the Wisconsin Land and Water Conservation, Board summarizes progress made in 2005 on programs administered by the Department of Agriculture, Trade and Consumer Protection (DATCP) and the Department of Natural Resources (DNR) to promote conservation and control polluted runoff from both rural and urban sources. The report is submitted in part to meet the requirements under s. 281.65(4)(o) and s. 92.14(12), Wis. Stats.

In 2005, county land conservation departments (LCDs) and municipalities delivered over \$50.5 million in conservation and storm water management practices and technical assistance through a total of 3,157 cost-share agreements with agricultural producers, and grants to 70 urban municipalities plus several lake districts and a tribal government. That money has been used to control erosion from farm fields and construction sites, repair eroded streambanks and shorelines, manage livestock manure to keep it out of waterways and slow down and reduce the pollutants from the storm water that flows off city streets and parking lots.

Considerable progress was made during the year in controlling nonpoint source pollution through cost-sharing about 3,850 Best Management Practices (BMPs). To date, ninety-two percent (92%) of all types of sites (cropland, livestock and streambank) identified as the most critical nonpoint source pollution sites have been resolved in Priority Watershed and Lake Projects. In 2005, counties and municipalities reported increasing progress toward implementing the statewide performance standards and prohibitions set forth in NR 151 and ATCP 50.

Most of the data for this report came from LCD staff. Other sources were DNR, DATCP, Natural Resources Conservation Service (NRCS) and U.W. Extension (UWEX). The following programs along with their authorizing Wisconsin statutes are included in this report:

- Land and Water Resource Management Planning Program (LWRM), ch. 92.10
- Soil and Water Resource Management Program (SWRM), ch. 92.14
- Priority Watersheds and Lake Projects (PWP), ch. 281.65
- Targeted Runoff Management Grant Projects (TRM), ch. 281.65
- Urban Nonpoint Source and Storm Water Management Grant Projects (UNPS), ch. 281.66
- Farmland Preservation Program (FPP), ch. 91



PROGRAM MANAGEMENT: Supporting Locally-Led Conservation

LAND AND WATER RESOURCE MANAGEMENT PLANNING PROGRAM

Our 72 counties are the main vehicles for delivering state conservation programs and funds. Land and Water Resource Management (LWRM) plans are the primary planning tools counties use to target their conservation efforts.

These plans are the product of a locally-led process, and must be approved by DATCP in consultation with DNR. Revised every five years, the plans establish county conservation priorities, and identify resources to address these key concerns. Each plan must describe how the county will implement the state performance standards to control farm and urban runoff.

By the end of 2006, 56 of 72 counties had revised their plans to meet the latest standards for approval. The remaining 16 will complete their revisions in 2007.

In addition to providing a framework for local implementation of state programs, the plans identify opportunities to address local needs. Cutting edge local activities include groundwater protection, shoreland protection, invasive species management, and control of non-farm runoff.

Plans also identify key partners to facilitate cooperation among groups. The most effective plans allow counties to solidify local support and secure new sources of funding for conservation efforts.

Local Conservation Success

Partnership Helps Little Green Lake

The Green Lake County land conservation department (LCD) has targeted Little Green Lake as an important resource concern, and has used its LWRM plan to develop an action plan to systematically improve water quality by taking advantage of a strong partnership with the Lake Protection and Rehabilitation District and multiple funding sources. The 466-acre lake suffers persistent algal blooms. Studies conducted over the past 15 years have identified pollution sources (primarily farm runoff) and the impact on aquatic life, providing the building blocks to take action.



In addition to its own action plan to reduce nutrient runoff and in-lake nutrient cycling, the district has contributed cost-share dollars to install much needed practices. The combined resources of the district and county have resulted in a succession of improvements including a diversion/sediment basin project in 1992-1993; grassed waterways in 1999; a 420 acre sub-watershed sediment basin built on the east side of the lake in 2000; and shoreland improvement projects in 2004-2006. In addition, a lake aeration system was installed in 2002 and a weed harvester was purchased. District support goes beyond dollars to include plant inventories, weed management and education.

The LCD has aggressively worked with landowners to implement needed best management practices such as improved fertilizer applications and funds to address unmet needs. The LCD was recently awarded \$30,000 for two water and sediment control basins through a highly competitive grants program funded by the Great Lakes Basin Program for Soil Erosion and Sediment Control.

The county has developed a long-term recipe for success by cultivating its relationship with the district and through exploring different avenues to secure funding.

FUNDING FOR CONSERVATION

In 2005, staff from county land conservation departments (LCDs) and municipalities delivered about \$50.5 million in conservation practices and technical assistance through a total of 3,157 cost-share agreements with agricultural producers and grants to 70 urban municipalities plus several lake districts and a tribal government.

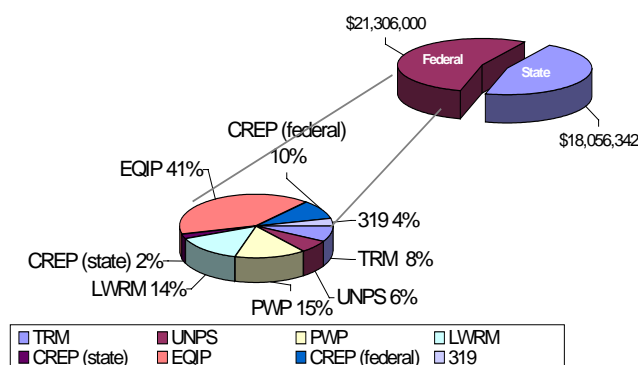
Funding for cost-sharing, staffing and support came from both state (\$27.7 million) and federal (\$22.8 million) funds¹. Federal funding came from EPA through section 319 of the Clean Water Act, and from USDA's Environmental Quality Incentives Program (EQIP) and Conservation Reserve Enhancement Program (CREP). Additional contributions of money, time and other resources that came from counties, municipalities, landowners, and non-profit organizations are beyond the scope of this report.

SOIL AND WATER RESOURCE MANAGEMENT PROGRAM

The Soil and Water Resource Management (SWRM) program supports locally-led conservation efforts by providing counties staffing grants and cost-share funding to implement LWRM plans.

For 2005, DATCP had fewer dollars available to allocate to the counties for staffing than in 2004. This decrease occurred at a time when counties are assuming a greater workload to meet both state and local priorities (see emerging trends discussion). For the 2005-2007 biennium, there is a slight increase in funding available to offset local staffing costs, however, this level continues to fall short of state demand.

Total Federal & State Cost-Share, 2005



The cost-share charts above show both the percentage that each funding source contributes and the dollar amounts in terms of the federal (EQIP, CREP and 319) and state portions.

¹ These totals include federal and state CREP funding but not CREP incentive payments.

Financial Data

SWRM Grant Program

- \$8.5 million:** amount provided by DATCP to counties for staffing and support
- \$5.6 million:** amount provided by DATCP for LWRM cost-sharing in 2005
- \$0.9 million:** amount of state CREP for BMPs
- 356:** number of county-based conservation staff (includes county contribution)
- 92:** percent of LWRM cost sharing spent in 2005 or extended to 2006

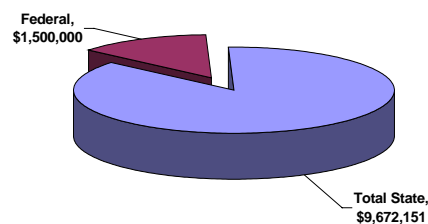
DNR Grant Programs

- \$3.2 million:** amount of TRM \$ spent on BMPs
- \$2.4 million:** amount of UNPS \$ spent on urban BMPs
- \$1.2 million:** amount of UNPS \$ spent on urban staff, planning, design, etc.
- \$5.9 million:** amount of PWP \$ spent on BMPs

Federal Grant Programs

- \$16.0 million:** amount provided through EQIP for BMPs
- \$3.8 million:** amount of federal CREP for BMPs
- \$1.5 million:** amount of s. 319 \$ spent on BMPs
- \$1.5 million:** amount provided by NRCS for local technical assistance

Federal & State Staffing Assistance, 2005



The staffing assistance chart shows the proportion of funding from federal 319 funds and state funding through SWRM and DNR urban grant programs

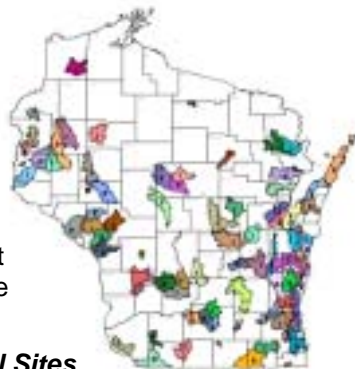
Compared with 2004, there has been a slight decrease in funding provided to counties for landowner cost-sharing. For the 2005-2007 biennium, DATCP does have additional funds available to cost-share nutrient management plans, but has lost a significant portion of its bond revenue funds used to cost-share manure storage, shoreland protection and other "hard" practices.

Counties have been making improvements in their ability to spend cost-share dollars. In 2005, there was a continued increase in the percent of available cost-sharing spent through grant contracts with landowners, or through extensions of landowner contracts. Counties and DATCP are working to find ways to improve the ability to use all available cost-share funds.

PRIORITY WATERSHED AND LAKE PROGRAM

Projects in this program set pollution reduction goals based on the severity of polluted runoff from both agricultural and urban sources. DNR administers funds for best management practices (BMPs). DATCP funds local staff that provides technical assistance, education, and project management.

Legislation passed in 1997 led to the end of new project selection. All projects will be completed by 2009.



Priority Watershed Critical Sites

While most participation in priority watershed/lake projects is voluntary, projects selected after 1993 are required to address the most critical sites needed for water quality improvement. Owners of critical sites must either participate voluntarily or be subject to legal orders to abate pollution. Local project managers help landowners install BMPs or change management practices on these sites.

As of the end of 2005, about 92% of all types of critical sites were resolved (livestock: 95%, uplands: 91%, streambanks/shorelines: 92%). Most of these critical sites are resolved voluntarily by the landowner with cost sharing for BMPs and technical assistance. The State took one enforcement action in 2005 for failure to correct pollution problems. Data on the types of critical sites are detailed under the manure management, cropland and streambank/ shoreline sections of this report.

Priority Watershed and Lake Projects

status as of Dec. 31, 2005

- 35:** number of active priority watershed and lake projects
- 51:** number of closed/completed projects since program started
- 1,381:** number of participating landowners
- 8,083:** total number of landowners participating in both active projects and those closed from 2000-2005
- 100:** number of nonpoint source impaired waters benefiting from project implementation

TRM Grants

- 17:** number of TRM projects awarded in 2005 (16 agricultural, 1 urban)
- 145:** total number of TRM projects, 1999 -2005 (95 agricultural, 50 urban)
- 112:** number of projects completed through 2005
- 138:** number of nonpoint source impaired waters benefiting from project implementation (1999-2005)(104 rural, 34 urban)

Urban NPS Grants

- 53:** number of UNPS project grants awarded in 2005 (29 planning, 24 design/construction)
- 253:** total number of projects, 2000-2005 (127 planning, 126 design/construction)
- 172:** number of completed projects through 2005
- 171:** number of nonpoint source impaired waters benefiting from project implementation (2000-2005) (76 planning, 95 design/construction)

Best Management Practices

- 1,117:** number of BMPs installed as part of the SWRM program during 2005
- 24:** percentage of practices under \$3,000 installed using SWRM funds
- 52:** percentage of practices over \$10,000 installed using SWRM funds
- 2,739:** number of BMPs installed through TRM, UNPS, and PWP

Critical Sites

- 25:** number of priority watershed & lake projects addressing critical sites
- 1,661:** number of critical sites identified in priority watershed projects
- 92:** percentage of all types of critical sites resolved as of Dec. 31, 2005

TARGETED RUNOFF MANAGEMENT GRANTS

DNR administers TRM grants to local governments to address both urban and rural polluted runoff. Projects are site specific and usually last two years. Typical TRM projects cost shared at 70%—up to \$150,000—include livestock manure management, erosion control and stream bank protection practices.

URBAN NONPOINT SOURCE AND STORM WATER MANAGEMENT GRANTS

These DNR grants cover both planning and construction projects to address polluted urban runoff. They typically last two years. Governmental units are eligible for grants even if they are covered by storm water permits under ch. NR 216, Wis. Adm. Code. Planning grants can pay for 70%—up to \$85,000—of storm water management planning, education, ordinance and utility development and enforcement. Construction grants may cover 50%—up to \$150,000—of the cost of BMPs such as storm water detention ponds, infiltration practices, and streambank and shoreline stabilization.

IMPAIRED WATERS AND TOTAL MAXIMUM DAILY LOADS (TMDLS)

Impaired waters, as defined by Section 303(d) of the federal Clean Water Act, are those waters that do not meet the state's water quality standards.

Every two years, states are required to submit a list of impaired waters to EPA for approval. As of Dec. 31, 2005, Wisconsin had 273 waters listed as impaired from nonpoint sources or a blend of point and nonpoint sources. An additional 387 waters were impaired from other sources, such as mercury.

A Total Maximum Daily Load (TMDL) is a plan to reduce the amount of specific pollutants reaching an impaired lake or stream to the extent that water quality standards will be met. As part of the TMDL, the amount of a pollutant that the water can tolerate and still meet water quality standards must be identified. That identified amount is allocated between point sources (wasteload allocation) and nonpoint sources (load allocation).

As part of the TMDL, the state must identify how it will implement the TMDL. Wasteload allocations for point sources will be implemented through the WPDES permit program. Nonpoint source load allocations will be implemented through Wisconsin's nonpoint source program. EPA must give final approval of all TMDLs.

As of the end of 2005, TMDLs were written to address 27 streams in Wisconsin. EPA granted Wisconsin credit for addressing 67 pollutants and impairments in these waters.

For more information, go to <http://dnr.wi.gov/org/water/wm/wqs/303d/>



Bob Queen, Department of Natural Resources

IMPLEMENTING RUNOFF PERFORMANCE STANDARDS

IMPLEMENTATION HIGHLIGHTS

Wisconsin's approach to controlling polluted runoff from agricultural and urban land uses has included statewide performance standards and prohibitions since October 2002. Performance standards and prohibitions are required components of LWRM plans, Farmland Preservation Program and TRM grants. All planning activities funded with Urban Nonpoint Source grants must meet the non-agricultural performance standards.

Most of the best management practices cited in this report contribute toward meeting the performance standards and manure management prohibitions. In 2005 there was an increase in the number of counties that reported active engagement in performance standards implementation through development of processes to inventory, track, report and notify landowners of compliance. Several counties were developing Memorandums of Understanding with DNR to clearly identify implementation roles and responsibilities. Additionally, more local ordinances are being passed that include the performance standards and prohibitions. All counties have statutory authority to enforce the performance standards and prohibitions under local ordinances.

Nineteen counties reported on the status of compliance with the agricultural performance standards and prohibitions as of the end of 2005. Table 1 shows the amount of each performance standard and prohibition that was evaluated for compliance and how much of the evaluated amount was in compliance. The data include croplands,

Performance Standards Implementation

- 18:** number of counties that have adopted local regulations to enforce performance standards and/or prohibitions.
- 6:** number of counties with either completed or draft Memorandums of Understanding with DNR to implement the performance standards and prohibitions
- 32:** number of counties inventorying farms for compliance with performance standards/prohibitions
- 24:** number of counties reported providing stormwater and construction erosion control services

practices and facilities that at the time of review or inspection were either in compliance or were out of compliance but brought into compliance by the end of 2005 through corrective measures.

Additionally in 2005, about 1/3 of the counties reported active involvement with stormwater management and construction erosion control such as:

- review of over 1,400 sub-divisions, stormwater management and/or construction plans for compliance with performance standards
- technical services to many municipalities
- thousands of site inspections
- approval of over 440 permits.

Table 1 **Compliance with Agricultural Performance Standards (19 counties reporting)**

Performance Standards/ Manure Management Prohibitions	Evaluated	In Compliance
Cropland soil erosion can't exceed "tolerable" rates (<i>acres meeting T</i>)	83,772	82,271
Manure storage facilities, when built, modified or abandoned, must meet accepted standards (<i>number of facilities</i>)	278	263
Clean runoff must be diverted away from livestock and manure storage areas located near waterbodies or areas susceptible to groundwater contamination (<i>number of farms</i>)	100	91
Application of manure and other fertilizers must be done according to an approved nutrient management plan (<i>acres planned</i>)	134,928	129,669
No overflow of manure storage facilities (<i>number of facilities</i>)	123	120
No unconfined manure piles near waterbodies (<i>number of farms with</i>)	321	307
No direct runoff from feedlots or stored manure into state waters (<i>number of facilities</i>)	741	680
No trampled streambanks or shorelines from livestock (<i>number of farms with</i>)	242	232

In 2005 a local initiative was started between Marathon, Lincoln, and Langlade counties to collaboratively address the challenges of implementing the agricultural performance standards and prohibitions. The initiative, which involves local, state and federal agencies, focuses on customizing a 10-step implementation strategy developed by the Wisconsin Association of Land Conservation

Employees (WALCE). This tri-county effort may serve as a model for other counties.

A multi-agency information and education team is working closely with the tri-county initiative to address statewide educational aspects of agriculture performance standards and prohibitions. The team is developing an education and outreach plan. Project outcomes will be piloted in the tri-county area.

Local Conservation Success

Meeting the Performance Standards Challenge

The Washington County Land Conservation Department was faced with a challenge presented by a 535-acre farm with 3 livestock operations that were contributing a significant amount of pollutants to the East Branch of the Rock River and the Kohlsville River. The site also presented several floodplain, wetland and shoreland zoning restrictions that the county had to address.

Planning for this project started in 2001. With the passage of the performance standards rules, the county had more leverage, but addressing both feedlots would be expensive and funding was limited. For the farm to come into compliance with the performance standards, it needed an evaluation of cropland and a nutrient management plan. In addition, two of the three operations failed to meet the manure management prohibitions against direct runoff from a feedlot into waters of the state and unlimited access by livestock to waters of the state.

After years of planning, presenting options and discussions of pros and cons, the landowners agreed on a relocation project for both livestock operations into one total confinement system located at the main farmstead. The county received a Targeted Resource Management grant to install several BMPS in 2004-2005 to bring this operation into compliance including animal lot relocation and abandonment, riparian buffers, critical area stabilization, and construction of a manure storage facility. The farm now has both a conservation plan to "T", a nutrient management plan on all cropland acres and 8.3 acres of permanent deed restrictions on abandoned operations and pasture areas. There are also 5 acres of critical area stabilization, and a manure storage facility constructed for the new confinement operation. And one of the producers is now writing the nutrient management plan for the farm after becoming qualified at the county's Farmer Certification Workshop.

The BMPs were chosen to reduce the excess phosphorus and loss of sediment. The county's modeling estimates that the BMPs resulted in reductions of 112 pounds of phosphorus and 11 tons of sediment per year. In addition to the modeling, the county has been collecting water quality data above and below one of the feedlot relocation sites. Prior to the animals being removed from this site, data collected indicated that ammonia concentrations were 2.6 times higher below the feedlot during a storm event. Six months after the animals were removed from this site the county was still recording ammonia concentrations 40 percent higher below the feedlot, leading them to believe that they are still encountering some residual nutrients in the stream and pasture area. County staff will continue to monitor the site for one more season. They estimate that levels will equalize in the near future.



Before



After

CONSERVATION RESULTS

BEST MANAGEMENT PRACTICES²

Data tracked by DNR and DATCP show that 3,856 agricultural and urban BMPs were installed during 2005 through a total of 3,157 cost-share agreements with landowners and 122 grants to municipalities. This includes

projects installed with funding awarded in 2004 and extended into 2005.

Generally, DNR cost-sharing is used to pay for a broad range of cropping and livestock management practices, while DATCP costs-share dollars are focused on the installation of low-cost practices.



² Conservation practices installed using state dollars only.

CROPLAND SOIL EROSION CONTROL

State Funded Conservation Practices

Keeping productive soil on the land and out of the water is one of Wisconsin's primary conservation goals. The state and counties administer a variety of programs that work together to help landowners reduce soil erosion to tolerable ("T") levels or below.

In 2005, state cost-sharing through SWRM, TRM, Priority Watershed and Priority Lake grants helped pay for agricultural BMPs to reduce soil erosion, including:

- 100,092 acres of cropland practices such as reduced tillage, high residue management, cover crops, to hold soil in place and grassed waterways to repair and prevent gullies.
- 191 practices to deflect or slow down runoff from slopes, such as grade stabilization structures.
- 159,412 feet of BMPs such as diversions, windbreaks and terrace systems.

Table 2 shows the number and types of erosion control practices installed through the SWRM, TRM and PW programs. Some practices installed for other purposes also have erosion control benefits.

Sediment Reductions In Priority Watershed And Lake Projects

Nearly all Priority Watershed and Lake projects developed goals to control sediment resulting from cropland soil erosion. Many also set specific goals to control gully erosion.

The total pollutant reduction goal for both cropland and gully erosion control was 535,565 tons per year (about 40% of the estimated load). By the end of 2005, sediment delivery to surface water had been reduced by 324,977 tons per year meeting 61% of the projects' goals. There was an additional 6,043 tons per year of sediment reduction reported by grantees that did not identify loadings or goals.³

Cropland Erosion Critical Sites

Twenty-three Priority Watershed and Lake projects identified a total of 1,373 sites deemed critical sources of cropland soil erosion. By the end of 2005, landowners and county staff had resolved 1,252 of those sites—91%—mostly through implementation of best management practices or management changes.

Transect Survey

Since the 1980s, landowners have made progress towards conserving productive soil on the land. The transect survey is a statistical method for estimating cropland soil erosion based on a visual

examination of field conditions. In 2005, 25 counties conducted the transect survey to measure the rate of soil erosion. In these counties, approximately 77% of fields were at or

Table 2
Erosion Control Practices Installed with State Funds

Practices (not a complete list)	Quantity Installed	
	SWRM	PWP/TRM
Residue management, waterway systems, cover crops, reduced tillage (acres)	1,322	98,770
Critical area stabilization, grade stabilization structures, sinkhole treatment, sediment basins (number)	142	49
Field diversions, windbreaks, shoreline protection, animal trails & walkways (feet)	150,661	8,751

below the tolerable rate of soil loss. This percentage has dropped slightly since 2000. There has been an increase in row crops—such as corn and soybeans—that typically increase soil erosion, but it is not clear that this change alone accounts for minor increases in erosion rates. To lower the risk of erosion from increased cropping, landowners are implementing cropping practices such as contour farming and no-till.

³ Includes data from projects that closed from 2000-2005

Farmland Preservation Program

The Farmland Preservation Program (FPP) identifies and protects agricultural areas against unplanned or poorly planned development. The program is designed to preserve agricultural land and open spaces by promoting orderly land use planning and development, by securing soil and water conservation, and providing tax relief to farmers in the program. All landowners receiving the credit must meet county soil and water conservation standards, which in all counties require soil erosion rates to be at or below tolerable rates ("T"). County land conservation department staff checks each participating landowner for compliance with the conservation standards at least once every six years.

8.1 million: number of Wisconsin's 16.2 million acres of farmland protected through the FPP

19,500: number of farmland owners who received farmland preservation tax credits

\$14.4 million: value of farmland preservation tax credit

\$721: average tax credit per claimant

21: percentage of the total property taxes offset by farmers who claimed the credit

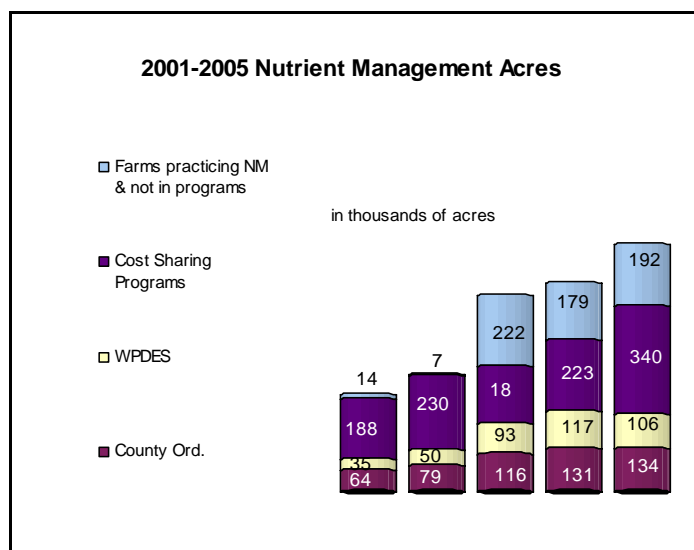
36: percentage of Wisconsin's potentially eligible farmers who claimed the credit

All 70 counties participating in FPP (Menomonee and Milwaukee do not participate) updated their county standards to require farmer participants to meet the performance standards and manure management prohibitions. Beginning in 2005, many FPP participants will need to meet a compliance schedule that includes these expanded conservation standards in order to receive the tax credit. Cross compliance requirements for NR 151 under FPP do not require that cost-sharing be made available.

NUTRIENT MANAGEMENT

Phosphorus-based nutrient plans are becoming more common as farmers and consultants understand the requirements and benefits. In 2005, 477 plans on 241,255 acres were written to the P-based standard. This is a 1,255% increase from 2003, when only 38 P-based plans on 25,260 acres were reported.

Cost-sharing, farmer education, and other approaches have helped the following counties achieve the state's highest percent of cropland acres covered by nutrient management plans: Brown, 46% (69,478 acres); Door, 25% (20,605 acres); Kewaunee, 25% (32,124 acres); La Crosse, 23% (17,840 acres); Oconto, 18% (21,893 acres); Fond du Lac, 16% (40,002 acres), Outagamie, 16% (30,461 acres) and Clark, 15% (40,143 acres).



2005 Planning Progress and Trends

The nutrient management (NM) agricultural performance standard requires landowners to develop and follow a NM plan to manage soil nutrient levels to maintain or reduce nutrient delivery to surface water resources. The NM standard was effective in October 2003 for new cropland fields, and in 2005 for fields in source water protection areas, those draining to 303(d) impaired waters, and those draining to outstanding and exceptional resource waters. The standard is effective in 2008 for all other fields. Wisconsin also requires farmers to have a NM plan when they are regulated under a county ordinance or state permit and when they accept government cost-share dollars for the installation of manure storage or barnyard runoff control structures.

DATCP tracks acres covered by a nutrient management plan through bulk fertilizer suppliers and through the nutrient management plan checklist submitted by farmers,

Table 3
Total Acres of Nutrient Management Reported

2001	2002	2003	2004	2005
302,070	366,581	611,605	650,963	772,661

agronomists, and governmental agency staff for every plan developed through a government program. Since 1995, Wisconsin farmers have reported a total of 8,605 nutrient management plans to DATCP covering approximately 3.2 million acres. Table 3 shows figures for the last 5 years.

In 2005, fertilizer distributors reported 1,726 plans on 772,661 acres. Through the 2005 *Nutrient Management Plan Checklist*, 49 counties reported nutrient management plans covering 583,149 acres. This was an 18% increase from 2004. The checklists also showed 354 farmers prepared their own plans on 88,152 acres.

MANURE MANAGEMENT

State Funded Conservation Practices

In 2005, landowners used state cost sharing to install manure management practices, including:

- 346 BMPs such as manure storage structures and site closures, and practices

Table 4
Manure Management Practices Installed with State Funds

Practices (not a complete list)	Quantity Installed	
	SWRM	PWP/TRM
Manure storage, waste transfer, barnyard and roof runoff controls, roofs, sediment basins, livestock watering (<i>number</i>)	159	187
Access roads/cattle crossings, fencing, treatment strips (<i>feet</i>)	66,017	4,400
Heavy use area protection, nutrient management, wastewater treatment strips (<i>acres</i>)	12,437	31,966

to control runoff from barnyards, feedlots, milk houses, and pastures.

- 70,417 feet of livestock fencing, access roads and cattle crossings and wastewater treatment strips to reduce runoff in areas of heavy livestock activity
- 44,403 acres of nutrient management, heavy use area protection and wastewater treatment strips to keep manure out of sensitive areas

Table 4 lists the types and number of installed practices. Total nutrient management data, including acres paid through federal funding, is reported in the previous section.

Nutrient Reductions in Priority Watershed & Lake Projects

Almost all of the Priority Watershed and Lake Projects inventoried all barnyards and feedlots in the project

Table 5 Nutrient Reductions in Priority Watershed and Lake Projects

Parameter	Initial loading (lbs./yr.)	Reduction goal (lbs./yr.)	Amt. Reduced (lbs./yr.)	% of goal Achieved
Phosphorus	415,633	228,281	151,920	67
COD	850,856	411,568	307,395	75

areas and identified phosphorus from livestock manure in these areas as key water quality problems. Several projects also identified excess phosphorus problems related to improperly stored or applied manure and milkhouse waste, and developed reduction goals for those sources. Three projects tracked reductions in chemical oxygen demand (COD) from BMPs and management changes associated with barnyards and feedlots. Through 2005, these projects had achieved a large percentage of their nutrient reduction goals.⁴ (see Table 5)

Livestock Related Critical Sites

Twenty-two Priority Watershed and Lake projects reported progress on the 217 livestock related critical sites identified in those projects. As of the end of 2005, 206 critical sites—95%—had been resolved primarily through the installation of best management practices.

⁴ Includes data from projects that closed from 2000-2005.

Managed Intensive Grazing

Management Intensive Grazing (MIG) is an increasingly popular option for managing livestock that can help reduce soil erosion, control nutrient losses, and better manage manure. Twenty-three percent of Wisconsin dairy farms practice MIG, and this number continues to rise annually. Besides environmental benefits, MIG offers economic and social advantages.

As an example, dairy grazers report higher net farm income and lower costs than farms using traditional, store-fed dairy systems. State funds support grazing on a limited basis through cost-sharing of grazing practices listed in Table 6.

Table 6

Grazing Practices Installed with State Funds

Practices (not a complete list)	Quantity Installed	
	SWRM	PWP/TRM
Permanent pastures (acres)	433	352
Permanent fencing (feet)	10,375	5,088

Local Conservation Success

Vilas County Combats Aquatic Invasive Species

Vilas County continues to demonstrate its leadership in responding to the problem of aquatic invasive species (AIS). The participants in a county AIS partnership effort were recently recognized for their exemplary work, receiving an Invader Crusader Award from the Wisconsin Council on Invasive Species



County officials and staff used conservation planning to identify ways to better manage AIS concerns. A key step was hiring a project coordinator to organize activities and work with partners. The Vilas County AIS Partnership, a group of over 200 volunteers, has dramatically increased AIS awareness and spurred management activity on lakes with problem infestations. Town Lakes Committees provide an effective means to promote watercraft inspection programs, complete baseline aquatic plant surveys, prepare long-term lake management plans, and secure funding to carry out these activities. There are several county-level action teams actively addressing big picture aspects such as infestation management, economic impact analysis, ordinance development and long-range planning. The AIS Partnership has mobilized state and local interest in this issue, including the involvement of local chambers of commerce and media. The county conservation department continues its support, having prepared a guide to help lake organizations, local governments and others. The publication entitled *Aquatic Invasive Species: A Guide for Proactive and Reactive Management* is available at: <http://www.wisconsinlakes.org/AboutLakes/PDFs/aisguidevc06.pdf>.

REGULATORY APPROACHES TO MANAGING MANURE

Notices of Discharge (NODs)

The DNR has been implementing this approach to address significant discharges to state waters from smaller-scale livestock operations under ch. NR 243 since the mid-1980's. DATCP engineers and county staff provide technical assistance and, if necessary, coordinate cost sharing to address problems identified through DNR inspections.

The number of NODs issued has declined from a historic range of 30 to 40 per year to a total of 17 between 2000 and 2005, with none being issued in 2005. The primary reasons were decreased funding, increased DNR workload to issue permits for Concentrated Animal Feeding Operations (CAFOs) and to address acute manure runoff incidents, reliance on county implementation of performance standards and reliance on funding through TRM grants. Because TRM is a competitive grant with about 9 months between project application deadline and grant award, DNR no longer has a timely and guaranteed funding source for NOD projects.

Concentrated Animal Feeding Operations

Under ch. NR 243, DNR regulates livestock operations with 1,000 or more animal units. These CAFOs require a Wisconsin Pollution Discharge Elimination System (WPDES) permit.

In 2006, the Natural Resources Board adopted proposed revisions to NR 243 to meet federal regulatory changes. The changes primarily affect CAFOs and deal with restrictions on manure applications near surface waters and during the winter,



NOD Statistics as of Dec. 31, 2005:

- 58:** number of active NOD actions underway
- 590:** number of NODs since program began
- \$6.7:** millions of grant dollars to NOD recipients since 1985

CAFO Statistics as of Dec. 31, 2005

- 147:** number of CAFOs with WPDES permits:
- 33:** number permits issued/reissued during 2005
- 5:** number of permits pending
- 13:** percentage of permit backlog (goal = 10% or less)

phosphorus-based nutrient management requirements, adjustments to animal unit equivalency numbers, additional groundwater protection associated with land applied manure and development of emergency management plans. The Legislature subsequently held hearings on the rule and returned it to DNR for further revisions. Final action is pending.

Local Ordinances

Local ordinances are becoming more important as tools to regulate manure management. Counties continue to modify their manure storage ordinances to include the state manure management prohibitions in NR 151. Under the state nonpoint law, most farms are entitled to cost-sharing if they are required to install practices to meet state performance standards. State approval of local ordinances is required if local ordinances include standards more stringent than those in NR 151.

Under the Livestock Facility Siting Law,

which became effective in May 2006, local governments must apply state standards if they require local permits for new and expanded livestock facilities. In jurisdictions that regulate facility siting, permit applicants must meet standards to ensure the application of manure according to the most current nutrient management requirements, and must comply with manure management prohibitions. Cross compliance requirements for NR 151 under the livestock siting law do not require that cost-sharing be made available. For additional information on the siting law, visit <http://livestocksiting.wi.gov>.

In addition, many counties are considering or have adopted ordinances that specifically regulate winter spreading of manure. Local governments will face continued pressure to manage environmental issues.

STREAMBANK, SHORELINES, WATER QUALITY AND HABITAT PROTECTION

State Funded Conservation Practices

In 2005, many landowners used state cost-share dollars to install practices that protect and restore streambanks and shorelines, protect groundwater, and improve habitat through wetland restorations. These conservation practices were some of the most popular and accounted for most of the practices installed in the northern third of the state.

Partners such as fishing and hunting groups, conservation organizations, friends groups, local conservation staff, U.S. Fish and Wildlife Service, and DNR staff often contribute matching funds along with expertise and labor to make these projects successful.

Table 7 highlights more popular cost-shared practices: streambank/shoreline protection, wetland restoration and well abandonments.

Streambank/Shoreline Sediment Reduction In Priority Watershed And Lake Projects

The majority of the Priority Watershed and Lake projects established goals to reduce by 95,770 tons per year the amount of sediment that erodes from streambanks and shorelines,

based on total load estimates of 190,693 tons per year. By the end of 2005, those projects reported reductions of 71,094 tons per year, or 74 percent of the reduction goal.⁵

Streambank/Shoreline Critical Sites

Twelve Priority Watershed and Lake Projects identified a total of 62 streambank/shoreline erosion sites as critical sources of sediment to surface water. By the end of 2005, 92% (57 sites) had been resolved, with 5 remaining.

Table 7

Streambank/Shoreline Practices Installed with State Funds

Practices (not a complete list)	Quantity Installed	
	SWRM	PWP/TRM
Stream crossings, streambank fencing, rip-rap, shoreline restoration (<i>feet</i>)	--	132,517
Stream crossings, rip-rap, other shoreline protection (<i>number</i>)	--	385
Vegetated riparian buffers, stream crossings, shoreline habitat restoration (<i>acres</i>)	--	20
Well Abandonments (<i>number</i>)	255	26
Wetland restoration (<i>acres</i>)	206	63

Easements

The acquisition of easements along rivers, streams and lakes has been a long-standing tool used cooperatively by landowners, counties, DNR, NRCS and others to protect water quality. Through June 30, 2006, DNR held a total of 1,371 water quality easements encompassing 13,832 acres of land.⁶ An additional 15 easements/fee title parcels totaling 1,616.64 acres were purchased in the North Branch of the Milwaukee River Wildlife and Farming Heritage Area as part of a 19,487-acre project located in Ozaukee, Washington and Sheboygan counties. The NRCS Farm and Ranch Land Protection Program in addition to state stewardship dollars is being used to protect agricultural lands that are within 20 miles of the Milwaukee metropolitan area.

⁵ Includes data from projects that closed from 2000-2005.

⁶ Totals are for closed real estate transactions (ownership of rights has transferred) and those approved by the Governor but not yet closed.

Conservation Reserve Enhancement Program

Wisconsin's Conservation Reserve Enhancement Program (CREP) is a cooperative effort with the USDA's Farm Service Agency (FSA) and Natural Resources Conservation Service (NRCS); Wisconsin state agencies DATCP and DNR; and Wisconsin county land conservation committees and landowners. This partnership will allow Wisconsin to leverage about \$67 million in federal payments over the next 15 years.

Wisconsin's CREP goal is to enroll 100,000 acres into riparian buffers, filter strips, wetland restorations, grassed waterways, and grassland habitat to improve water quality and grassland habitat for endangered grassland birds and other wildlife.

The goals and progress through 2005 are shown in Table 8. Landowners can choose to enroll their land in either 15-year agreements or perpetual easements.

Table 8

CREP Information

	Maximum Allowed or Goal	Enrolled or In Process
Total of all practices	100,000 acres	39,840 acres
Grassland Projects	15,000 acres	10,813 acres
Riparian Buffers	80,000 acres	26,252 acres
Wetland Restoration	5,000 acres	2,775 acres

Based on FSA December 31, 2005 report on acres offered for CREP.

Local Conservation Success

Addressing Urban Runoff in Waukesha County

As described in their Land and Water Resource Management Plan, Waukesha County has developed a sophisticated and multi-faceted program to address the natural resource concerns attributed to construction site erosion and storm water runoff. As a result of this program, in 2005 the county reported a reduction in the amount of sediment entering area surface water resources from construction sites and storm water runoff by an estimated 1,900 tons.

The problems in Waukesha County from construction site erosion and storm water runoff are major issues of concern that stem from the continued development of land for urban and suburban uses. Current figures estimate that annually, 4.7 square miles of rural land (3,000 acres) are converted for urban uses in the county. During the recent revision to the county Land and Water Resource Management Plan, a local citizen advisory committee indicated that control of urban runoff from construction sites and storm water runoff remains a top priority in the county.

To help address these issues, the county is promoting the development of regional storm water management and watershed protection plans. Development of storm water management plans at a watershed scale promotes partnering between communities to coordinate land use and storm water planning for the benefit of specific water resources.

Waukesha County also developed, and is actively implementing, a countywide erosion control and storm water management ordinance. The ordinance was originally adopted in 1992 as a construction site erosion control ordinance. The ordinance was revised in 1998 to include post-construction storm water runoff. The most recent rewrite to the ordinance occurred in 2005 to incorporate new conservation standards for controlling non-agricultural runoff found in NR 151 and NR 216 and to address the many lessons learned since its original adoption. Under this ordinance, the county reviews plans and issues permits for the development of new sites, and inspects the sites for compliance with the county's ordinance. The county also actively conducts information and education efforts designed to highlight the problems associated with construction site erosion and increased storm water runoff, and promotes solutions to address these concerns.

The county plans to continue their existing efforts to make further progress in protecting surface water resources from the impact of urban runoff.

URBAN STORMWATER MANAGEMENT

URBAN BEST MANAGEMENT PRACTICES

In 2005, 70 municipalities used TRM and UNPS funds to install urban practices, develop BMP designs and produce stormwater and construction site erosion control plans. Table 9 shows the type and number of practices installed and planned with state cost share. This represents a fraction of the total need.

DNR STORM WATER PERMIT PROGRAM

Since the mid-1990s, DNR has administered a program under NR 216 to address the issue of polluted urban storm water runoff that comes from such sources as construction sites, lawns, streets and parking lots to storm sewers and is discharged to rivers, streams, lakes and groundwater without treatment.

Research on urban streams in Wisconsin has shown high concentrations of suspended solids, bacteria, heavy metals, oil and grease and polycyclic aromatic hydrocarbons (PAHs) in the discharges from municipal stormwater sewers, which empty directly into lakes and streams with no treatment.

In 2005, DNR developed general permits for the municipal, industrial and construction program areas for Phase II activities. Phase II of EPA's stormwater program addresses storm water discharges from small municipal separate storm sewer systems (MS4s) that serve less than 100,000 people and construction sites that disturb one or more acres. The rule contains six minimum measures for small MS4s to reduce pollutants in urban storm water.

Municipal: There are 62 municipalities regulated under individual storm water permits with another 10 or so expected to receive individual MS4 permit coverage. Additionally, DNR sent to about 140 municipalities applications (Notices of Intent) for coverage under a general discharge permit in March 2006.

Industrial: As of December 2005 there were a total of 4,255 industrial facilities covered by a stormwater discharge permit. The Auto Dismantling and Scrap Recycling permittees are offered the choice to join a Cooperative Compliance Program (CCP), developed to establish industry-wide approaches to reducing or eliminating stormwater contamination. These programs provide group training, foster information sharing, and promote BMPs. In 2005 there were 8 CCPs serving 344 facilities.

Table 9

Urban Practices Planned/Installed

Practices (not a complete list)	TRM/UNPS
Detention systems, infiltration devices, street sweeping, other practices (number)	53
Streambank, Shoreline Protection (feet)	9,500
Stormwater & erosion control plans, utility district plans (number)	28

Construction: DNR authorizes coverage under a stormwater permit for construction sites with one or more acres of land disturbance. In 2005 there were 1,423 construction permits issued.



INFORMATION AND EDUCATION

COUNTY ACTIVITIES

In 2005, counties and other grantees continued to lead or participate in educational activities ranging from general efforts to raise awareness of conservation and polluted runoff control to technical workshops targeted to specific audiences.

Many counties offer nutrient management workshops and training to help farmers write their own nutrient management plans. Farmer training has been critical to county efforts to increase cropland acres under nutrient management plans. Counties also held workshops on beach management, groundwater protection, stream ecology, CREP, shoreline protection and construction specifications.



Local governments play a critical role in protecting drinking water sources, including private wells. Counties often combine workshops/presentations with well testing to increase public awareness and isolate individual problems. This well data is critical in identifying contamination concerns, and refining state and local programs to better protect drinking water.

Counties rely on volunteers to address needs identified in their management plans. Without volunteers, for example, they could not stencil storm water drains and accomplish other tasks that build public awareness. Counties reported working with over 1,500 volunteers to conduct water monitoring activities from stream walks to scientific monitoring. Most activities involved students and have become regular events.

From field days to erosion control workshops, counties are continuing to find effective ways to communicate with the public about soil and water conservation.

Priority watershed participants received about 3,500 contacts from local project staff through personal visits, targeted mailings and phone calls. Reported results include 33 new contracts or plans with landowners, more timely BMP inspections and better targeting of funds.

Many counties rely on newsletters to keep landowners informed of county programs, cost-share availability, and best management practices.

Counties reported conducting pasture or crop walks and tours that informed nearly 350 officials, students and landowners about conservation issues and practices.

BASIN EDUCATION

Wisconsin's Basin Education Initiative employs a collaborative approach in promoting land and water resources management in the state. University of Wisconsin-Extension, in cooperation with DNR, DATCP, NRCS and FSA, provides educational programs and other services in areas delimited by the state's major river basins.

In 2005-06, Basin Educators worked with counties and other partners to deliver local services such as:

- ♦ Training workshops on manure spreading/transporting, stormwater management, construction erosion control, and stormwater models
- ♦ Information and education components of several LWRM plans
- ♦ Conservation field days for schools
- ♦ Customized fact sheets on manure management for several counties, a watershed planning guidance booklet, rural development guidelines



- ♦ Groundwater and drinking water education programs including private well testing, interpreting test results, displays at county fairs and other events, Groundwater Guardian programs, public forums, festivals, and well abandonment demos
- ♦ Water monitoring training and support for ongoing lake and stream monitoring
- ♦ Rain garden demonstrations, clinics and tours highlighting their installation; rain gardens were developed in 10 communities
- ♦ Help to NRCS and LCD to coordinate agricultural landowner education programs and assist with land use planning educational programs

Basin Educators and their partners have also worked on statewide activities including:

- ♦ 4 construction erosion control technical workshops attended by 650 county and municipal staff and consulting engineers.
- ♦ Phase II stormwater Wisline Web conference series targeting 1) 57 DNR Stormwater staff and UW-Extension educators, and 2) 20 sites reaching 249 staff and officials from affected municipalities and their consultants.
- ♦ Agricultural performance standards education (see "Performance Standards" section).
- ♦ Publications: *Stormwater Education and New Federal Stormwater Rules*, the *Dirty Dozen and Beyond*, and *Avoid That Sinking Feeling*—an educational brochure to help manure applicators identify and understand karst features and practices to avoid groundwater contamination.
- ♦ Displays: karst features and groundwater protection, groundwater problems from various land uses, weed identification (based on *The Dirty Dozen and Beyond*), Discovery Farms interpretive signage to address agricultural runoff impacts.
- ♦ Regional and state conferences such as "Protecting the St. Croix".
- ♦ Facilitating several committees involved with water quality protection, watershed planning, manure management.
- ♦ Website Support: <http://runoffinfo.uwex.edu>, a portal to information about Wisconsin's

performance standards and other rural and urban runoff management programs with links to various fact sheets and other websites.

More information at
<http://basineducation.uwex.edu>

VOLUNTEER STREAM MONITORING

Hundreds of Wisconsin citizens participate in activities related to protecting and monitoring their local streams and rivers each year. Over 1200 citizens working as part of 40 locally organized programs, currently monitor local streams for dissolved oxygen, temperature, water clarity, habitat, flow, and macroinvertebrate health. School, civic and other interest groups carry out storm drain stenciling and river clean up projects.

These projects are coordinated through the Water Action Volunteers (WAV) Program, sponsored by the DNR and the UWEX in cooperation with partners such as counties, nature centers, local municipalities, Basin Educators, teachers, friends of rivers groups, university faculty and staff, and DNR biologists across the state.

In addition to the activities listed in the box, the WAV program was responsible for the following activities in 2005:

- ♦ Training 13 people to monitor for *E. coli* bacteria as part of 6-state research project

WAV Volunteer Monitoring Activities for 2005

- 491:** *number of volunteer days (volunteers x days) spent monitoring streams (3,304 days since 1997)*
- 108:** *number of streams monitored*
- 26:** *number of counties with WAV program volunteers (7 new programs started in 2005)*
- 345:** *number of volunteers trained at 24 training events*
- 65:** *number of participants trained in crayfish surveys*
- 40:** *number of local volunteer monitoring programs (1250 volunteers)*
- 450:** *number of volunteers participating in river clean ups*

- ♦ Maintaining Trained Local Sampler projects on 4 Discovery Farms
- ♦ Producing and distributing the *Who's Who in Citizen Monitoring in Wisconsin* booklet
- ♦ Producing a new educational poster on macroinvertebrate identification
- ♦ DVD sets that include monitoring methods, stream ecology, and watershed/ macroinvertebrate education sections.

A tri-level citizen-based Water Monitoring Network (Network) was developed by DNR and UWEX staff with input from numerous partner groups. The goals of the Network are to 1) educate citizens about the status of Wisconsin's water resources, 2) build a network of informed citizen advocates for management and protection of Wisconsin's water resources, and 3) obtain water resource data useful for DNR decision-making

The Network incorporates the WAV Citizen Stream Monitoring Program (as well as the Citizen Lake Monitoring Network and the Clean Boats, Clean Waters Program) into its first level.

In the second level program, citizens are trained to use DNR methodologies to monitor pH, dissolved oxygen, continuous temperature, and transparency in streams. The River Alliance of Wisconsin partnered with the DNR to hire a full-time coordinator to implement level 2 pilot projects for the Network. Working with DNR biologists in each region of the state, the pilot project coordinator trained 100 citizens (working in 16 groups) to monitor stream sites of interest to the group or to the DNR. The pilot effort will allow the DNR to evaluate staff time commitments, costs vs. benefits, and program effectiveness to determine whether or not to continue this approach.



Kari Jacobson photo

Third level projects available for citizen participation in 2005 included a crayfish survey of water bodies statewide, and an *E. coli* bacteria monitoring project. In the latter, two home lab methods were used by volunteers to assess *E. coli*, and results were compared to State Laboratory of Hygiene test results. Preliminary results of this study were featured as the cover story of the winter 2006 *Volunteer Monitor* newsletter 18(1), a national publication. More information at <http://clean-water.uwex.edu/wav/>.

Standards Oversight Council

Since 1996, the Standards Oversight Council (SOC) has relied on interagency cooperation to develop technical standards used by farmers, government staff and others to install conservation practices. SOC uses a process to systematically involve multiple public and private sector viewpoints. This process results in better standards that will be accepted by everyone who must use them.

SOC partners are DATCP, Wisconsin Department of Commerce, DNR, USDA Natural Resources Conservation Service (NRCS), Wisconsin Association of Land Conservation Employees, and Wisconsin Land and Water Conservation Association. Each partner provides staff and funding to support SOC because they recognize that quality standards are fundamental to effective conservation programs.

Numerous work teams comprised of technical experts from throughout Wisconsin have diligently revised and developed approximately 50 NRCS and DNR technical standards over the past ten years. Examples include the revision of NRCS Standard 590 Nutrient Management, and the creation of multiple DNR stormwater management technical standards. A major part of this process is two stringent public review periods, during which draft standards are distributed to hundreds of individuals for comment.

This collaborative process ensures that Wisconsin has high quality technical standards to meet changing conservation needs. For more information visit www.socwisconsin.org.

EMERGING TRENDS

IMPROVED MANURE MANAGEMENT

State programs and policies must evolve to respond to new challenges. We recognize the need to better manage manure, protect groundwater, support the local conservation delivery system and secure working lands.

Statewide we know the importance of improving manure management, particularly winter spreading of liquid manure. A statewide task force convened by DNR and DATCP in 2005 issued recommendations to reduce manure runoff events, including (1) increased adoption of practices such as winter spreading plans, (2) more state funding for nutrient management plans, and (3) improvements in educational and other government programs. DATCP and DNR developed an action plan to implement these recommendations. Among the key steps is a plan to pursue a joint manure management program similar to the program they once operated to respond to runoff incidents. To support this effort, DATCP will set up a funding reserve to cost-share practices to control runoff at livestock operations that receive a notice of intent or notice of discharge.

As a result of well contamination and other events, groundwater protection has emerged as a vital issue. To respond to continued problems, DNR amended its Well Compensation Program to provide grant money to help landowners remediate manure-contaminated wells. In areas of the state sensitive to groundwater contamination, local governments are looking for ways to better protect this resource and developing local programs to promote groundwater protection.

LOCAL DELIVERY SYSTEMS

County conservation departments, like other areas of government, have been undergoing changes to meet the challenges of reduced resources and competing demands that range from aquatic invasive species to urban stormwater management. While this report demonstrates that counties devote a significant investment of money and time to conservation in the state, there is an ever-increasing demand that more be done. Each year more counties are gearing up to implement the state performance standards and prohibitions but progress will be slow in the face of limited resources. There is demand for cost-share dollars, which include funding to help farmers reduce manure runoff events and comply with state standards required by the livestock facility siting law.

WORKING LANDS PROTECTION

Productive working lands must be viewed as something more than a source of commodities; they are renewable resources that require stewardship and protection. By protecting our farms, forests and other working lands, we can secure for the future the environmental and other benefits they provide.

The Working Lands Initiative got underway in 2005. A broad-based steering committee developed several recommendations including an update to the Farmland Preservation Program, creation of a working lands enterprise area program, and creation of a new state purchase of development rights grant program.

These emerging concerns offer challenges and opportunities, and will redefine the direction of our state programs and policies related soil and water conservation.



Bob Queen, Department of Natural Resources

Local Conservation Success
Price County Conservation Partners

The Village of Prentice in southern Price County now boasts a beautifully restored shoreline along its golf course water holes, thanks to the hard work and planning of the LCD staff and an exceptional young man. Eric Cummings, a senior at Northland College in Ashland and an avid golfer, approached the LCD with his idea to install a native plant buffer along the steep-sided, mowed pond shorelines. The ponds serve a drainage function for the low-lying golf course and connect to the Jump River when the water is high. The Jump River was recently designated as an Exceptional Resource Water by the Department of Natural Resources.

The LCD staff inspected the site and provided Eric with education, advice, trees and tree shelters along with DATCP cost-sharing for plants to get him started. Eric informed, educated and organized a team including the village, fraternal organizations, his former high school science teacher, his alma mater, family and friends to turn a modest project into a significant environmental contribution. Over 5,000 plugs of grasses, forbs, shrubs and hundreds of trees (many of which came from the science class) were planted around two ponds and a small forest was started. The buffers now reduce erosion, reduce maintenance and geese problems while improving water quality and habitat. The LCD uses the site as a demonstration and it has been very well received by the community. The site has become an ongoing project for the science class and the students continue to grow plants and trees for planting at the site.



Before



After